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ORTHOPTERA FROM IRAQ AND IRAN

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The fragmentary state of our knowledge on the distribution of Orthoptera in southwestern Asia makes every collection from that area of great scientific value. The collections made by Dr. Henry Field and his collaborators in Iraq and Iran during the Field Museum Anthropological Expedition to the Near East in 1934 and by his collector, Yusuf Lazar, who has sent specimens from Iraq during 1935 and 1936, are of particular interest, since some of the material was collected from localities from which no records of Orthoptera existed. The spelling of place-names conforms, wherever possible, to the form adopted by the Permanent Committee on Geographical Names appointed by the Royal Geographical Society, London.

Among the significant results of the expedition, particularly important was the rediscovery of *Eremocharis syriaca* I. Bolivar, an acridid which was very insufficiently described and whose affinities remained obscure. The specimen brought back by the expedition enabled me to identify this species and to prove that *Eremocharis syriaca* is really a member of the genus *Utubius* Uvarov belonging to the isolated and ancient Irano-Turanian group Thrinchini.

Another valuable discovery was that of a female of a mantid, *Iris nana* Uvarov, which species was known from the male sex alone.

It will be seen that the collection, although not very large, proved to be of definite, scientific value, and I am greatly obliged to Mr. Clifford C. Gregg, Director of Field Museum, for permitting me to work it out for publication, as well as for the generosity of the Trustees of Field Museum in presenting to the British Museum (Natural History) some of the more interesting specimens.

BLATTIDAE

Polyphaga pellucida (Redtenbacher).

Iran: Takht-i-Jamshid (Persepolis), one male, August 26, 1934; H. Field.

Widely distributed in Iran, Transcaspia, and Turkestan.

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***Polyphaga aegyptiaca* (Linnaeus).**

Iraq: An Nasiriya, one male, March 17, 1934; Yusuf Lazar. Hinaidi, near Baghdad, numerous males, June–August, 1935; Yusuf Lazar.

The collection contains also a number of females and larvae of *Polyphaga*, which can not be determined with certainty.

***Heterogamodes maris-mortui* (Janson).**

Iraq: Hinaidi, near Baghdad, two males, August 28 and September 22, 1935; Yusuf Lazar.

***Periplaneta americana* (Linnaeus).**

Iraq: Baghdad, one male, H. Field; three males, May–June, 1935, Yusuf Lazar.

***Shelfordella tartara* (Saussure).**

Iran: Tehran, two males, August 2, 1934; H. Field.

Three larvae from Rutba, Iraq, May 10, 1934, may also belong to this species, which is known to occur in a wide area of deserts from Turkestan to southern Iran and Egypt.

***Blatella* sp.**

Iraq: Hinaidi, near Baghdad, one male, July 17, 1935; Yusuf Lazar.

MANTIDAE

***Iris nana* Uvarov.**

Iran: Takht-i-Jamshid (Persepolis), one female, August 26, 1934; H. Field.

This species was known only from the male sex, and the description of the female follows:

Female.—Larger than the male, but smaller than the female of *I. deserti* Uvarov. Head with eyes about twice the maximum width of pronotum. Pronotal margins very closely and minutely denticulate. Elytra reaching the apex of posterior femora, very broadly rounded apically, non-hyalinous. Wings broad.

General coloration light yellowish green. Wings sulphur yellow; anterior area of the same color; spots large, bronze black; anal area without fenestrate pattern.

Total length 29; pronotum 10; elytra 14; wings 11 mm.

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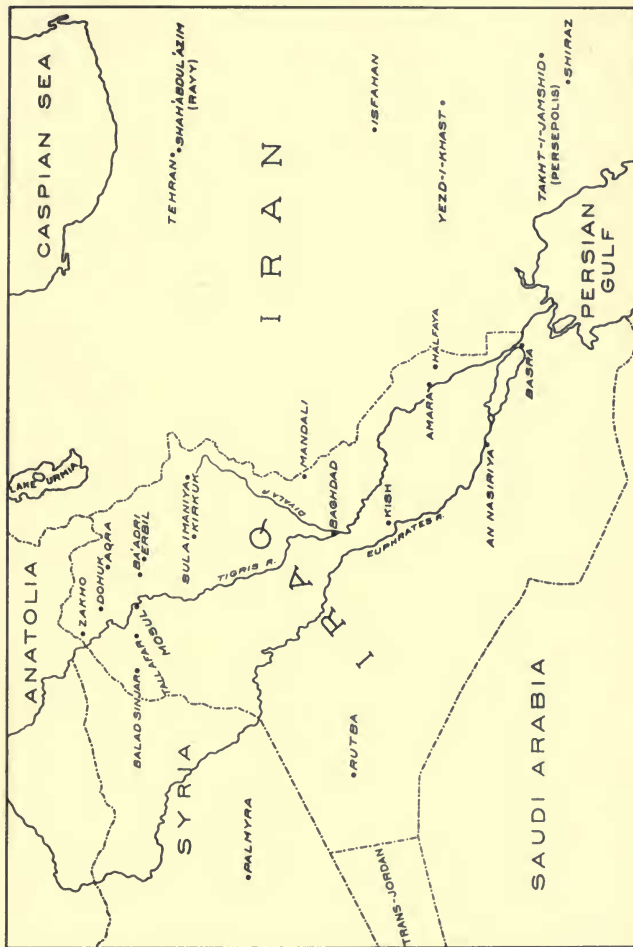


FIG. 59. Map showing localities where collections were made.

Unfortunately the specimen is not sufficiently well preserved to be photographed. It has been very kindly presented to the British Museum (Natural History).

Mantis religiosa (Linnaeus).

Iraq: Hinaidi, near Baghdad, three males, four females, July–November, 1935; Yusuf Lazar.

Hierodula tenuidentata Saussure.

Iran: Shah 'Abdul 'Azim (Rayy), one female, August 14, 1934; H. Field.

The spines of front femora are only brown behind, while they are quite black in the closely allied *H. transcaucasica* Brunner, which probably should be regarded as a subspecies of *tenuidentata*.

(?)**Rivetina syriaca** (Saussure).

Iraq: Hinaidi, near Baghdad, one male, August 5, 1935; Yusuf Lazar. Baghdad, two males, August 26–27, 1936; Yusuf Lazar.

I can not be certain in my determination, since the genus has never been the subject of a critical revision.

Rivetina sp.

Iran: Tehran, two larvae, August 2, 1934; H. Field.

Empusa fasciata Brullé.

Iraq: Zakho, north of Mosul, one male, June 18, 1934; H. Field.

Empusa uvarovi Chopard.

Iraq: Baghdad, one male, July 30, 1935; Yusuf Lazar. Hinaidi, near Baghdad, one female, August 27, 1935; Yusuf Lazar.

GRYLLIDAE

Gryllotalpa gryllotalpa (Linnaeus).

Iraq: Baghdad, June 1–16, 1934, H. Field and R. A. Martin; adults, April–July, 1935; larvae, January 25–June 16, 1935, Yusuf Lazar. Dohuk to Aqra, June, 1934; H. Field and R. A. Martin.

Gryllus bimaculatus De Geer.

Iraq: one male, two females, June 3–28, 1935; larva, March 12, 1936; Yusuf Lazar. Hinaidi, near Baghdad, three males, September 22–October 5, 1935; one larva, November 5, 1935; Yusuf Lazar.

Gryllus amarensis (Chopard).

Iraq: Hinaidi, near Baghdad, one male, August 20, 1935; Yusuf Lazar.

Gryllulus domesticus (Linnaeus).

Iraq: Baghdad, one female, November 18, 1934; Yusuf Lazar.

Gryllulus desertus (Pallas).

Iraq: Baghdad, one female, April 1, 1935; one male, June 7, 1935; Yusuf Lazar. Hinaidi, near Baghdad, one male, one female, August 6–September 18, 1935; Yusuf Lazar.

Gryllulus burdigalensis (Latreille).

Iran: Shah 'Abdul 'Azim (Rayy), one female, July 14, 1934; H. Field.

Gryllulus tartarus tartarus (Saussure).

Iraq: Hinaidi, near Baghdad, one male, July 17, 1935; Yusuf Lazar.

This is the pale desert subspecies known to occur in central Asia, Iran, Arabia, and lower Mesopotamia. In the hilly parts of western Asia it is replaced by the dark subspecies *obscurior* (Uvarov), which occurs already in the Al Gazira of the Mosul district of Iraq (see Uvarov, Eos, 10, p. 41, 1934).

TETTIGONIIDAE

Paradrymadusa sizovi Uvarov.

Iran: Tehran, one female, August 2, 1934; H. Field.

Pholidoptera zebra (Uvarov).

Iraq: Ba'adri, east of Mosul, one female, June 13, 1934; H. Field.

Medecticus assimilis (Fieber).

Iraq: Karya Sheikh Khanis, near Tall 'Afar, west of Mosul, one female, June 2, 1934; H. Field.

Metrioptera affinis (Fieber).

Iraq: Jebel Golat, west of Mosul, two males, one female, seven larvae, May 27, 1934; H. Field. Karya Sheikh Khanis, near Tall 'Afar, west of Mosul, one female, June 2, 1934; H. Field.

Metrioptera intermedia (Serville).

Iraq: Jebel Golat, west of Mosul, two males, one female, May 27, 1934; H. Field.

Tettigonia viridissima Linnaeus.

Iraq: Jebel Golat, west of Mosul, one male, one female, May 27, 1934; H. Field.

Tettigonia caudata (Charpentier).

Iran: Tehran, one female, August 2, 1934; H. Field.

Conocephalus fuscus turanicus (Semenov).

Iraq: Ba'adri, east of Mosul, one female, June 13, 1934; H. Field.

Conocephalus buxtoni Chopard.

Iraq: Hinaidi, near Baghdad, one male, September 2, 1935; Yusuf Lazar.

Acrometopa syriaca Brunner.

Iraq: Zakho, north of Mosul, one male, June 18, 1934; H. Field.

ACRIDIDAE

Acridella robusta (Uvarov).

Iraq: Tell as Shor, between Tall 'Afar and Jebel Sinjar, west of Mosul, two females, May 30, 1934; H. Field. Karya Sheikh Khanis, near Tall 'Afar, one female, June 2, 1934; H. Field. Zakho, north of Mosul, one female, June 8, 1934; H. Field. Hinaidi, near Baghdad, nine males, four females, June 8–September 17, 1935; Yusuf Lazar. Baghdad, one female, September 3, 1935; Yusuf Lazar.

Four larvae from Baghdad and one from Hinaidi may also belong to this species.

Platypterna obtusa Salfi.

Iran: Tehran, one female, August 2, 1934; H. Field.

Known from the Aras (Araxes) Valley, Armenian S.S.R., and from 'Iraq-i-'Ajam and Kushanin, Iran.

Platypterna acuta I. Bolivar.

Iraq: Baghdad, two males, 16 females, some larvae, March 8, April 16 and 18, 1934; June 8, September 3, 1935; March 8–22, 1936; Yusuf Lazar.

Known to occur in Palestine, Iraq (Babylon, Baghdad, and Basra), and southwestern Iran.

Platypterna uvarovi Salfi.

Iraq: Zakho, north of Mosul, one female, June 18, 1934; H. Field.

Occurring from Ordubad in Armenian S.S.R., down to Mandali, in Iraq.

Duroniella lucasi (I. Bolivar).

Iraq: Baghdad, two females, October 10 and 15, 1934; three females, March 3, 1935; one male, seven females, July, 1935; three males, 23 females, March, 1936; Yusuf Lazar.

Known from Tunis, Algeria, Egypt, Palestine, and Iraq.

Dociostaurus maroccanus (Thunberg).

Iraq: El Ba'ayar, near Tall 'Afar, one male, two females, May 29, 1934; H. Field.

Notostaurus anaticus (Krauss).

Iran: Tehran, one female, August 2, 1934; H. Field.

Aiolopus strepens (Latreille).

Iraq: Ba'adri, east of Mosul, one male, June 13, 1934; H. Field.

Aiolopus affinis (I. Bolivar).

Iraq: Hinaidi, near Baghdad, numerous specimens, July–September, 1935; Yusuf Lazar.

Aiolopus thalassinus (Fabricius).

Iraq: El Ba'ayar, near Tall 'Afar, one female, May 29, 1934; H. Field. Baghdad, four females, October 10, 1934; one female, October 15, 1934; one female, December 20, 1934; two females, March 8, 1935; numerous specimens, June, 1935–March, 1936; Yusuf Lazar.

Hilethera maculata (Karny).

Iraq: Hinaidi, near Baghdad, one male, two females, July 21–29, 1935; Yusuf Lazar.

Acrotylus insubricus (Scopoli).

Iraq: Baghdad, one female, October 10, 1934; one male, two females, February 27, 1935; one female, March, 1935; five males, 17 females, March, 1936; Yusuf Lazar. Hinaidi, near Baghdad, one female, June 12, 1935; one female, September 2, 1935; Yusuf Lazar. Sulaimaniya, southeast of Mosul, one larva, July 6, 1934; H. Field.

Oedipoda miniata (Pallas).

Iraq: Ba'adri, east of Mosul, one male, June 13, 1934; H. Field. Dohuk, north of Mosul, one female, June 14, 1934; H. Field.

Iran: Tehran, three females, August 2, 1934; H. Field. Yezd-i-Khast, one female, August 21, 1934; H. Field. Isfahan, one female, August 19, 1934; H. Field.

Sphingonotus savignyi Saussure.

Iraq: Baghdad, one male, two females, June 15, 1935; Yusuf Lazar.

Sphingonotus rubescens (Walker).

Iraq: Rutba, one male, May 14, 1934; H. Field.

Iran: Tehran, one female, August 2, 1934; H. Field.

Sphingonotus theodori Uvarov.

Iran: Takht-i-Jamshid (Persepolis), one male, three females, August 26, 1934; H. Field and R. A. Martin.

Iraq: Baghdad, one female, August 21, 1935; Yusuf Lazar.

Described originally from Palestine, this species proved to be widely spread, occurring from western Anatolia to Iran.

Sphingonotus vosseleri Krauss.

Iraq: Hinaidi, near Baghdad, one male, July 18, 1935; Yusuf Lazar.

Sphingonotus carinatus Saussure.

Iran: Tehran, one female, August 2, 1934; H. Field.

Iraq: Hinaidi, near Baghdad, numerous specimens, July–September, 1935; Yusuf Lazar.

Mistshenko has recently proved that the well-known *S. mecheriae* Krauss is synonymous with *S. carinatus* Saussure (see Eos, 12, 1936).

Sphingonotus nebulosus persa Saussure.

Iran: Tehran, six females, August 2, 1934; H. Field. Yezd-i-Khast, 1 male, August 25, 1934; H. Field.

Sphingonotus obscuratus obscuratus (Walker).

Iraq: Baghdad, two females, May 29, August 29, 1935; Yusuf Lazar.

This subspecies has been known so far only from Libya, Egypt, and Sinai; in Iran it is replaced by *S. obscuratus brunneri* Saussure, 1884. However, the difference between these two subspecies is very slight.

Sphingonotus satrapes Saussure.

Iraq: Shui, near Mosul, one male, May 25, 1934; H. Field. Baghdad, numerous specimens, May–August, 1935; Yusuf Lazar.

Hinaiidi, near Baghdad, numerous specimens, June–July, 1935; Yusuf Lazar.

Locusta migratoria (Linnaeus) ph. **solitaria**.

Iraq: Two males, four females, June–July, 1935. Hinaiidi, near Baghdad, two females, July–September, 1935; Yusuf Lazar.

Utubius syriacus (I. Bolivar).

Eremocharis syriaca I. Bolivar, Rev. Biol. Nord France, 5, p. 483, 1893.

Iraq: Rutba, one female, May 12, 1934; H. Field.

This is certainly the most interesting specimen in the whole collection, since I. Bolivar's *Eremocharis syriaca*, described after a single female, collected by Dr. Th. Barrois in the desert near Palmyra, remained a problematic species. Its description was based on a specimen previously preserved in alcohol and obviously discolored and the type appears to have been lost, as all my attempts to trace it proved fruitless.

The specimen before me now, although without the abdomen, is certainly a female. It agrees with the description of *Eremocharis syriaca* in every respect, except the dark coloration of the posterior genicular arc, which in the type may have been due to bad preservation. The type is also a little larger, but it will be seen from the table of measurements given below that the difference in this respect is too small to be of taxonomic value.

Since Rutba, where our specimen was taken, is not far from Palmyra, and certainly in the same natural area of the Syrian desert, I feel justified in identifying the specimen with *Eremocharis syriaca*, even in the absence of the type of the latter.

The insect, however, does not belong to *Eremocharis*, but to the genus *Utubius*, recently described by me from the Kuwait Territory on the Persian Gulf, in northeastern Arabia (see Journ. Linn. Soc. Lond., Zool., 39, p. 544, 1936). I even consider that my *Utubius zahrae* and *Eremocharis syriaca* represent only geographical races of one species, since they differ only in the degree of development of the black band on the hind wings. The species must, therefore, be called *Utubius syriacus* (I. Bolivar), the northern race being subsp. *syriacus* (I. Bolivar) and the Arabian race subsp. *zahrae* Uvarov.

The black wing band in subsp. *syriacus* is broad and continuous (fig. 60, a), leaving an outer margin distinctly narrower than the band. In subsp. *zahrae* the band is narrower than the margin (fig. 60, c) and split up into series of spots, sometimes quite broadly separated from each other. It is very interesting to note that an

analogous geographical variation in the wing pattern is observed in the series of subspecies of *Tmethis gibber* (Stål), of which a subsp. *gibber* with completely black wings (apart from white preapical area) occurs in Syria; subsp. *latus* Uvarov with very broad black band is known from Urfa, Aleppo vilayet, southern Turkey, and Erbil and Kirkuk in Iraq; subsp. *angustus* Uvarov with narrow band is found in Khanaqin, Iraq; and in southern Pusht-i-Kuh and Bushire, Iran, lives the extreme subsp. *reductus* Uvarov with the band very narrow and discontinuous (see Uvarov, Eos, 10, pp. 103-106, 1934).

As I have mentioned already, there are no other substantial differences between subsp. *syriacus* and subsp. *zahrae*. If the female of *syriacus* is compared with the type of *zahrae*, which is a male, a rather striking difference can be observed in the structure of the median carina in the prozona of the pronotum, since in *syriacus* this carina appears very low (fig. 60, b), while in *zahrae* it is strongly projecting. I was very fortunate, however, in receiving recently two females of *zahrae*, taken in the original locality together with a male which does not differ in any way from the type. The prozonal carina in these females proved to be exactly as in *syriacus*, and very distinct from what is observed in the male (fig. 60, e). This is, therefore, a sexual character, and the unknown male of *syriacus* should be expected to possess the carina as strongly developed as in the male of *zahrae*.

Since the female of *zahrae* has not yet been described, I may add that it does not differ from the male in other respects, and the measurements of both sexes, as well as of the female of *syriacus*, are given in the following table:

	<i>syriacus</i> ♀		<i>zahrae</i>	
	Type	Rutba specimen	♀	♂
Length of body.....	43	?	44	31.0
Length of pronotum.....	12	11.5	11	7.5
Length of elytra.....	50	45.0	46	35.0
Length of hind femur.....	21	19.0	20	15.0

The Rutba specimen of *Utubius syriacus syriacus* was kindly presented to the British Museum (Natural History).

Tmethis cisti (Fabricius).

Iraq: Jebel Golat, west of Mosul, two males, one female, May 27, 1934; H. Field. Karya Sheikh Khanis, near Tall 'Afar, one female, June 2, 1934; H. Field. Tell as Shor, between Tall 'Afar and Jebel Sinjar, one female, May 30, 1934; H. Field.



FIG. 60. a, b. Elytron, wing, head, and pronotum of female *Ulysses syriacus syriacus* (L. Bolivar). c, d. Elytron, wing, head, and pronotum of female *Ulysses syriacus zahrae* Uvarov. e. Elytron, head, pronotum, and wing of male *U. s. zahrae* Uvarov.

***Tmethis gibber latus* Uvarov.**

Iraq: Jebel Golat, west of Mosul, one male, one female, May 27, 1934; H. Field. Tell as Shor, between Tall 'Afar and Jebel Sinjar, three males, one female, May 30, 1934; H. Field.

***Tmethis hotsoni* Uvarov.**

Iran: Isfahan, one male, August 19, 1934; H. Field.

This species was originally described by me from British Baluchistan, and subsequently recorded from many localities in Iranian Baluchistan, Seistan, and eastern Khurasan (Trav. Inst. Zool. Acad. Sci. U.S.S.R., 1, p. 212, 1933). It is, therefore, new from central Iran. The only specimen from that area has very pale yellow wings, without any trace of blue, and this may be a good subspecific character, if it proves to be constant in a series.

***Nocarodes* sp.**

Iraq: Shui, near Mosul, one female, May 25, 1934; H. Field.

This species is already known from specimens collected by myself in the same country in 1932. It is almost certainly new, but I refrain from describing it, until a thorough revision of this difficult group can be undertaken.

***Pyrgomorpha conica* (Olivier).**

Iraq: Baghdad, five females, March 8–June 12, 1935; Yusuf Lazar. An Nasiriya, one female, March 16, 1935; Yusuf Lazar. Hinaidi, near Baghdad, numerous specimens, March, 1936; Yusuf Lazar.

Iran: Tehran, one female, August 2, 1934; H. Field.

***Dericorys albidula* Serville.**

Iraq: Baghdad, three females, June 5–15, 1936; Yusuf Lazar.

This species is known to occur from the Sahara to Turkestan and Baluchistan, but its discovery near Baghdad is nevertheless of considerable interest, since it is a typical inhabitant of sand hills.

***Dericorys roseipennis lazurescens* Uvarov.**

Iran: Isfahan, one male, one female, August 19, 1938; H. Field.

***Thisoicetrus littoralis asiaticus* Uvarov.**

Iraq: Baghdad, one female, October 10, 1934; three males, two females, June–October, 1935; Yusuf Lazar. Hinaidi, near Baghdad, 11 females, July–November, 1935; Yusuf Lazar. Shui, near Mosul, one female, May 25, 1934; H. Field.

Thisoicetrinus pterostichus (Fischer-Waldheim).

Iran: Takht-i-Jamshid (Persepolis), three males, eight females, August 26-28, 1934; H. Field and R. A. Martin.

The specimens have apparently been collected in the same spot, but there is remarkable variation in their size, as will be seen from the following table:

	♂♂	♀♀
Length of body.....	28-33	39-52
Length of elytra.....	18-23	26-39
Length of hind femur.....	15-19	21-29

Calliptamus sículus deserticola (Vosseler).

Iran: Tehran, five females, August 2, 1934; H. Field. Takht-i-Jamshid (Persepolis), five females, August 26-28, 1934; H. Field and R. A. Martin.

Kripa coelesyriensis (Giglio-Tos).

Iraq: Jebel Golat, west of Mosul, one female, May 27, 1934; H. Field.

Anacridium aegyptium (Linnaeus).

Iraq: Baghdad, and Hinaidi, near Baghdad, numerous specimens, 1935; Yusuf Lazar. An Nasiriya, one male, one female, March 14, 1935; Yusuf Lazar.

Iran: Tehran, two males, one female, August 2, 1934; H. Field.

TETRIGIDAE

Hedotettix alienus Uvarov.

Iraq: Baghdad, one female, February 27, 1935; Yusuf Lazar. Hinaidi, near Baghdad, numerous specimens, July-September, 1935; Yusuf Lazar.